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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,448	12/31/2003	Nicholas J. Frigo	ATT/2003-0176	4984

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EXAMINER

KIM, ELLEN E

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/750,448

Applicant(s)

FRIGO ET AL.

Examiner

Ellen Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 15-43 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is responsive to Applicant's amendment filed on 4/12/06.

Response to Arguments

Applicant's arguments filed 4/12/06 have been fully considered but they are not persuasive. Applicant argues that Russell fails to teach or suggest a method for identifying an optical fiber, comprising imparting mechanically a time-varying modulation onto an optical signal propagation in said optical fiber.

Examiner does not agree with Applicant's argument because Russell clearly shows in column 4, lines 62- end the mechanical time varying modulation onto an optical fiber, such as a bending method.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1- 14 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Russell et al [USPAT 6,480,635].

Russell et al disclose a method for identifying an optical fiber, comprising:

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imparting mechanically [see column 4, lines 62-end] a time-varying modulation [line 5 of Abstract] onto an optical signal [a beam 14, line 1 of Abstract] propagating in said optical fiber 10, and
detecting [line 10 of Abstract] the presence of said imparted time-varying modulation to identify said optical fiber;
wherein said imparting and detecting do not interrupt the propagation of said optical signal along said optical fiber.

In re claims 2 and 3, Russell et al teach in lines 8-9 of Abstract that said time-varying modulation is imparted on said optical signal by varying a property of said optical fiber [such as ...the line integral thereof along the cable in non-zero...] as a function of time. It is clear this also implies a curvature of at least a portion of said optical fiber is varied as a function of time such that a time-varying loss of power is generated in said propagating optical signal.

In re claims 4, 5, and 14, the vibrating at least a portion of said optical fiber [such as bending, see column 4, lines 62-end] is inherently done by implying time varying modulation to the optical fiber.

In re claim 5, note that "small" is not clearly defined in the claim, therefore, the claimed limitation is inherently met by Russell et al device.

In re claim 6, Russell et al teach in line 9 of Abstract that a polarization of said propagating optical signal is varied as a function of time.

In re claims 7 and 8, Russell et al teach in lines 3-5 of Abstract that the birefringence of said optical fiber is varied via a time-varying electromagnetic field.

In re claims 9 and 10, Russell et al inherently show said time-varying modulation is imparted on said optical signal by varying a frequency of said propagating optical signal is varied as a function of time, and the frequency of said propagating optical signal is varied as a function of time through time-varying non-linear interactions.

In re claim 11, it is clear the interaction of acoustic waves with the optical signal is also inherently done once the time-varying non-linear interactions are created.

In re claim 12, it is clear that the optical signal is from a source of the optical signal.

In re claim 13, it is clear that the electromagnetic field 24 is applied to an intermediate point between optical fibers in a fiber path.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

For all official patent application related correspondence for organizations reporting to the Commissioner of Patents:

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- Correspondence that is transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (571) 272-2349. The examiner can normally be reached on Monday through Thursday.

Ellen E. Kim
Primary Examiner
June 20, 2006/EK

A handwritten signature in black ink, appearing to read 'Ellen Kim', is written over the printed name and date.